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ABSTRACT

This final report of an experimental program to test student attitudes describes progressive stages of the program conducted between 1965 and 1969 by the social studies department of the New Rochelle Albert Leonard Junior High School. Most of the time, pupils in the experimental unit were grouped heterogeneously for special presentations such as lectures, films, and panels. Otherwise, students were grouped homogeneously accoring to their individual needs and the purposes of instruction. In 1968, all seventh grade students were centralized in a separate wing, providing the opportunity for more specialized instruction to incoming students. Team teaching and a "swing teacher" assigned to each team were special features of this seventh grade school. Data analysis from a student opinion poll confirmed a major hypothesis that students with differing abilities, grouped heterogeneously in a program of planned team teaching, will develop significantly better attitudes than students grouped homogeneously in a program of traditional teaching. (JK)

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NEW ROCHELLE CITY SCHOOL DISTRICT
George C. Clark, Supt. of Schools

Dec. 1969

Final Report
New York State Experimental and Innovative Programs
Article 73, Section 3602_a, Subdivision 14 of the State Education Law

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City School District of New Rochelle
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Examination of recent attempts to move toward educational excellence in conjunction with appropriate measures to resolve social-educational issues, yields team teaching and flexible grouping methods as a strong positive and lasting approach.

For the past four years approximately 900 pupils out of the 1800 pupil Albert Leonard Junior High School were involved in a project employing team teaching and flexible grouping as the experimental method of instruction within the Social Studies Department. The experimental approach was compared with traditional homogeneous grouping. The objective of the project was to determine whether student achievement, attitudes and motivation were significantly improved through team teaching and flexible grouping.

Evaluative instruments were utilized to measure changes in the above variables as well as teacher and student satisfaction and dissatisfaction. Past findings have indicated that there were no significant differences in achievement tests, between experimental and control groups but there were significant findings related to school attitudes, satisfaction and dissatisfaction, and teachers awareness of student attitudes. In all cases the results favored the team taught students.

During the completion of the 1967-68 program the results and needs of the school led to the broadening of team teaching and flexible grouping to the entire 7th grade in all areas. This new expanded program required changes in design and analysis. This final report will be somewhat repetitive in that it presents both the 67-68 and 68-69 school year results in addition to future program changes and new methods of analysis for 1969-1970 school year.

PROBLEM AND RATIONALE

Historical Development

It appears useful at this time to present the historical development of the social study team teaching and flexible grouping to the present expanded total 7th grade and proposed 8th grade program.

In September of 1957 a new assistant principal was appointed to the Albert Leonard Junior High School. The principal at that date had administered the school for some 30 years. The system of grouping consisted of 15 to 16 class sections on each grade level grouped homogeneously using I.Q., achievement test scores and teacher recommendations. Students were assigned to sections that ranged from the brighest (section 1) to the slowest (section 15). This system had produced a group consciousness on the part of students, teachers and parents which, in the opinion of many had a damaging impact on the school. Youngsters in the top sections were considered to be superior students while those in the middle and bottom sections considered themselves and were thought of by others to be inferior. There were few, if any, black students in the highest sections while the "bottom" classes were almost entirely composed of black students.

In May of 1958 a new principal was appointed. Shortly thereafter, the grouping system was changed to a five track classification. In 1959 plans were drawn and construction began on a new Albert Leonard Junior High School building. The new school was designed as a school within a school basis and all major efforts dealt with the implementation of that concept. In September of 1960, the new Albert Leonard opened at its present site. By the middle of the 60-61 school year the school was considered reasonably complete. At this time the number of tracks were reduced to four. There began an effort to isolate "slow learners" into separate sections. In addition to the four tracks, two sections of slow learners were formed on each grade level. Staff members worked during the summer to develop curriculum and materials. Unfortunately, the method at special grouping for slow learners proved unsatisfactory and after somewhat more than a year it was dropped. The four track arrangement of grouping students (called the quartile system continued in effect.

In August of 1962 Mr. Lewis Lyman was appointed principal of the Albert Leonard Junior High School. Mr. Lyman continues today as principal. Two months later, the United States Commission on Civil Rights issued a report entitled "Civil Rights, U.S.A., Public Schools, Cities in the North and West, 1962." (Kaplan, 1962). In the last paragraph in the section on New Rochelle, the author observed:

> "A further area of battle unrelated to Lincoln (School) is beginning to appear. One of New Rochelle's two junior high schools practices a rigid ability grouping which has left few, if any Negroes in the fastest classes, and a preponderance in the slowest. Negro leaders have branded this type of grouping a method of segregating Negro children and of perpetuating the unfair treatment that they have received in the elementary schools. The battle lines on this issue have not yet been clearly drawn, but unless some settlement is reached in the near future, the tranquillity of New Rochelle may be disturbed again."

This report was picked up and widely reported in the metropolitan press. Mr. Lyman was called before the Board of Education and questioned, and the mandate for change was loud and clear. The principal reported these events to the Albert Leonard staff. In a curious coincidence, the social studies department had been considering applying for funding for a demonstration project in grouping. Within two months the school had prepared the first application for a research grant from the United States Office of Education for a demonstration project in team teaching and flexible grouping.

In January, 1963, just three months after the excitement over the Civil Rights Commission's report, following letter from Dr. Salten, Supt. of Schools was received.

> "I want to commend your initiative in the preparation of the proposal for a research on grouping practices in the junior high school. I shall do what I can to move it along at the state and national level. Win, lose, or draw, however, the proposal is an excellent piece of work. Congratulations."

Unfortunately, the United States Office of Education expended the major proportion of its research funds that year entirely on the college level, and the application was turned down. However, the New Rochelle Board of Education agreed to support the school's efforts on a limited basis, and in the summer of 1963, a staff study group of the social studies department prepared the details of the project, which actually began in September, 1963. That year, one hundred students were involved on each grade level, and one hundred on each grade level were considered a control group. Teachers volunteered and were assigned to the project; their programs were not reduced. That year and the following year, all teachers in the project (with the exception of team leaders) taught a full load, five periods per day, and proceeded to do their planning after school, in the evenings, on weekends and holidays, etc.

The initiation of this effort served as a tremendous impetus to the staff of Albert Leonard. While other departments remained unconvinced of the desirability of team teaching and flexible grouping, they did become much more active in curriculum revision. It was during this period that the foreign language department completed the changeover to the audio-lingual method, the math department gradually went over to the modern mathematics curriculum, there was involvement in the Princeton Junior High School Science Project, etc. This spirit spilled over into other areas as well. The school started the Weekend Leadership Conferences, with funds from outside organizations as well as the Board of Education. They were the first school in New Rochelle to initiate cottage meetings for parents, and ran twenty-six such meetings in three years. The beginnings of a Mid-Start program were formulated with the assistance of Mrs. Lila Carol, who was then working up the first Community Action Program as assistant to Mayor Ruskin. There was great emphasis on developing into an innovative school.

The team teaching and flexible grouping project continued successfully and grew. However, the strain of the work load was being felt by the social studies department. Wanting to give those teachers some relief as well as a more formalized structure and not wanting to overburden the Board of Education financially, there was a successful application for funding from the State Department of Education.

In September of 1966, the state-funded effort began, and social studies teachers had their teaching programs reduced to four periods and were given a common planning period daily. A considerable amount of work still had to be done outside of school hours, but the teachers were glad to have their efforts recognized in this way. The first of the state funds were received. Eventually, these were to total, over a three year period, $40,775.49. Of course, the New Rochelle Board of Education was also contributing an equal amount.

One of the requirements of the State was that reports, analyzing the results of the team teaching and flexible grouping project, be prepared and disseminated. Such reports were developed by Dr. Irving Zweibelson (1965) working closely with Miss Bahnmuller (Social Studies Department Chairman), the principal, and of course, all staff members in the project. For the past two years the responsibility for evaluation has been assumed by this author. The program began to receive recognition in places outside New Rochelle. A few examples of this approbation are:

An article was prepared for the Journal of Experimental Education and appeared in 1965. In December, 1966, a letter from Professor H. L. Lindgren of San Francisco State College was received, asking permission to include that piece in his book Readings for Educational Psychology in the Classroom, published by John Wiley and Sons, Inc. The school received another letter of commendation from Dr. Salten in behalf of the Board of Education. There was participation in a radio program on WVOX and to prepare materials for the Standard Star. The project was reported in Education for the Disadvantaged, by Gordon and Wilkerson. The school was asked permission by McGraw Hill to include their material in a book they were preparing.

An article was prepared for "Exchange", the journal of the Metropolitan School Study Council. A request was received from the superintendent of schools in White Plains, for copies of the report. He was giving a talk in Kansas City and wanted to refer to it. He also wanted copies for the New York State Teachers Association Equal Opportunity Advisory Committee, of which he was chairman. School Management magazine described the project in a news item.

In a search for additional funds, reports were prepared for the Ford Foundation and the Kettering Foundation. The school was asked by the State Education Department to participate in a convocation in Albany, and a description of the project appeared in a State Department publication entitled Experimental and Innovative Programs, 1966-67. These various reports began to bring visitors, both within the school system and community as well as from teachers and administrators elsewhere.

This activity did not go unnoticed among the rest of the school staff. Following a series of ten small-group meetings in the 1967-68 school year aimed at self-evaluation, the decision was reached to implement the 7th Grade School. This program would put all major departments on a team teaching and flexible grouping basis, and re-organize the school so that each grade, especially the 7th grade, would have a wing of its own in the building.

The 7th grade progdam was presented to the Superintendent and the Board of Education in the spring and summer of 1968, and in September of 1968, the 7th Grade School was born. It was an instant success. While there were a few dissenters and many problems, teachers, students and parents were so pleased with the results that the faculty recommended that the program be continued for the next year's 7th grade (1969-70) and also implemented, with changes, in the 8th grade as well.

Funds were solicited through the Director of Secondary Education for a staff study group to prepare a new 8th grade program. That group did its work in the spring of 1969, reported its results to staff and won overwhelming approval. Unfortunately, other events were taking place at that time, and there was dismay to learn at the end of the school year in June, 1969, that the 8th grade program could not be implemented. The staff, however, continued to work and plan toward the possibility of implementation of the 8th grade program in the 1970-71 school year.

As this present report is considered the final report it will present:

1. Social Studies Team Teaching and Flexible Grouping for grades 7, 8 and 9.
2. Description of Team Teaching Program for 1967-68.
3. Description of Social Studies Team Teaching Program in Grades 8 and 9 and the total grade 7 Team Teaching program for 1968-69.
4. Exploration into students attitudes for 1968-69.
5. Proposed 8th grade total Team Teaching for 1970-71.
6. Proposed statistical analysis for 1969-70 school year.

RATIONALE

It long has been accepted as an article of faith by many teachers and most parents that ability grouping practices increase the teacher's instructional efficiency and effectiveness. And, in turn, it has been assumed that children will learn more efficiently and effectively from such instruction. It is this line of reasoning which has in the past been responsible for the ability grouping policy in New Rochelle's junior high schools. This type of grouping policy appears to be in conflict with the goals of the social studies program and the total junior high school, especially in the development of desirable socio-civic and personal attitudes.

The wide variance in socio-economic status, religious beliefs and racial patterns in New Rochelle require the curriculum of the social studies and school program to reflect on value systems and human relationsnips as well as prescribed courses of study. As stated previously, the ultimate goal of the social studies and school program is the development of desirable socio-civic, personal behavior, better learning and classroom instruction is directed toward imparting the values, knowledge, and attitudes which help to bring this about. Stated as a credo, this would be:

a. The realization of the inherent worth of the individual and his unique contributions to the general welfare of the community;

b. The development of maximum interaction among various members to participate effectively in the solution of problems common to the community and learning.

c. The attainment of the knowledge and skills necessary in analyzing and interpreting societal and work problems and in implementing this thinking into constructive action;

d. Developing constructive attitudes toward social studies, peers, teachers, learning, democratic living and acceptance of fair standards and values;

e. Increasing the motivation of students to participate in the educational process as an important part of becoming a good citizen.

f. Recognition of the rights of all students to a good education.

In order to accomplish these goals, the Social Studies Department of the Albert Leonard Junior High School engaged in a program of team teaching and flexible grouping. The experimental program, which has been in operation four years, has yielded the following basic significant results. There was no significant difference in the achievement of "Team Target" and "Traditional Target" students on the New York State Social Studies Test. There were significantly more positive attitudes towards Social Studies and Peers for "Team Target" than for "Traditional Target" students. These positive results appeared to indicate the need for continuation of such a program. This lead to the implementation of a total Grade 7 Team Teaching Program. It is felt, however, that additional questions must be explored and answered if such a program is to be expanded into other subject areas. A preliminary investigation into additional literature as well as discussions among the professional staff indicated a paucity of information and experimental findings on satisfaction and dissatisfaction among students and teachers. The primary concern was the possible effects team teaching and flexible grouping could have on teacher and student satisfaction.

Students' dissatisfaction with school in the past centered about the idea that if a student was dissatisfied the problem was within him, the student. More recently, attempts to explain students' behavior have encompassed the student, the school and the interaction of the two. Baraheni (1962) underlined the importance of attitudes and social interaction as they affect school success. A teacher does not operate in a vacuum devoid of community and school pressures and influences. The feelings of teachers have led to self-fulfilling prophecy. The students actually learn little and behave poorly because their teachers, convinced of their inability to learn or behave, make little or no effort to teach (Passow, 1963). Teachers cannot be satisfied with poor achievement of a student solely because of a low intellectual performance.

Jackson and Getzels (1959) studied dissatisfaction with school among adolescents. Two major conclusions were suggested by the findings of this study. First, dissatisfaction with school appears to be part of a larger picture of psychological discontent with the student, rather than· a direct reflection of the students' inefficient functioning in the classroom. Second, it appears that the dynamics of dissatisfaction are greater for boys than for girls.

Brodie (1964) contrasted the attitudes of 2 groups of urban 11th graders by means of a specially developed poll. The students were classified as satisfied and dissatisfied with school and then compared on four tests of educational development. The satisfied students generally outperformed the dissatisfied students. This kind of study would lead one to think that successful people ought to appear satisfied and unsuccessful people dissatisfied. In educational terms, teachers might expect students who are doing well in school to express contentment when asked to describe their school experience and expect those students who are doing poorly to express discontentment. Surprisingly, Jackson and Lahaderne (1966) in reviewing the literature found that educational research has not yet provided a confirmation of the above expectation. Over the past twenty-five years there has been an impressive amount of evidence accumulated to show that scholastic success and attitudes toward school are typically unrelated to each other (Tschechtelin, Hipskind and Remmers, 1940; Tenenbaum, 1944; Malpass, 1953; Jackson and Getzels, 1959; Diedrich, 1966).

If this is confirmed by further investigation, the absence of a strong linkage between success and satisfaction should provoke further areas of needed investigation. How sensitive, for example, are teachers to differences in their students' views of school? Lahaderne, Jackson and Happel (1966) analyzed teachers' perceptions of students' attitudes as they related to feelings expressed, sex and intelligence. The population of this study was the entire 6th grade of the public schools in a predominantly white working class suburb.

Differentiated groupings into tracks, such as college preparatory, business, vocational and general on the high school level show a perhaps unintended social class segregation of youngsters. In general, the curricular in the typical comprehensive high school in America reveal a class stratification of students. Often, there is a high proportion of upper and middle class students enrolled in the college preparatory curriculum, those lower-middle or upper-lower class students who are upwardly mobile enrolled in the commercial and vocational curriculum, and generally the middle-lower or lower-lower class children enrolled in the general curriculum. Samuels (1966) has indicated that long before a youngster enters secondary school one can predict his high school track on the basis of the socio-economic level of the neighborhood lived in, scores on tests of educational ability and reading readiness results. In order to provide a realistic education for all her students, the teacher should be sensitive to differences in their students' views of school.

This research has indicated a common concern over the set of attitudes a student develops toward his school experiences. Little is know, however, about the visibility of these attitudes to the teacher (Lahaderne, Jackson, Happel 1966). Often, teachers opposed to team teaching have stated that this method does not allow the teacher to know her students as well as if she had the student in the traditional small classroom. It is felt that the method and questionnaire (Student Opinion Poll) devised by Jackson and Getzels (1959) would not only evaluate students attitudes, but also give some indication as to the accuracy of teachers' perceptions of these attitudes. This would be a beginning attempt at answering the question - "Do Team Teachers still know their students?"

Although the above philosophy is the primary concern of this paper, there is also an awareness of the specific effects Team Teaching has on the student and the teachers. It is no doubt true that positive or negative outcome in either group are related to and in turn cause changes in each other and the total program through an interaction process.

The whole personality of the teacher is involved in the educative process. His actions may be affected by the behavior of the people around him; the school administrator, the other teachers in the school, the children and the members of the community. His ways of working may also be influenced by the physical environment of the school such as the type of learning aids, the size of the class and the physical conditions of the building. All of these influences make up the field of forces which determine the behavior of the teacher in the educational situation. It is commonly accepted that the efficiency of the teacher is related to how he feels about his job.

An examination of previous investigations (Coffman 1951) indicates that while a large amount of descriptive data has been collected, nobody has succeeded in developing a satisfactory differential measuring instrument for exploring the relationships among the several components of morale in the educational situation. In almost every study, a generalized job satisfaction scale has been used as a criterion. Even a scale was an improvement over the mere voicing the opinions as in the past. More recently Mathis (1959) attempted to design and test an attitude inventory for measuring teacher morale. Mathis (1959) also tried to determine if teacher morale is significantly related to salary policy in a small sample of school systems. No significant differences in morale level were found between schools grouped on the basis of type of salary schedule.

As salary was not thought to be a significant factor in teacher satisfaction, other attempts to improve understanding of the functions and relationships within a school system have become perennial sources of educational research. Recent studies (Fishburn, 1962) have pointed up the necessity for attacking these problems through role perceptions; through deciding what is expected of professional personnel, what they expect of themselves and what others expect of them. Six roles were perceived by teachers and administrators in the following order of importance (1) Mediation of the culture (2) Member of the school community (3) Director of learning (4) Guidance and counseling person (5) Liaison between school and community, and (6) Member of a profession. It was important to note that the teachers and administrators perceived the teachers' roles in contradictory manners. No single factor explained all the differences in perception of the teachers' roles. Age and length of professional experience were the factors most related to differences in perception of the teachers' roles. The teacher assignment and the socio-economic level of the service community in which teachers were assigned were the factors least related to differences in role perception.

This evidence as well as other studies appear to relegate high morale to the satisfaction of needs and low morale denial of these needs. Kirkpatrick (1964) found morale higher and energy output greater when the patterns of administration and organization are such that the basic drives of employees are stimulated and satisfied. This investigation found a positive relationship exists between job satisfaction and perceived staff promotional policies. Satisfaction was higher where there was promotion from within the school system.

Other investigators (Taylor, 1962) have attempted to examine the question of teachers from the other side of the coin. Over eight hundred children from primary and secondary schools ranked items descriptive of a good teacher in four scales. The items of each scale were representative of statements made by children in school essays about "A Good Teacher." Differences were found between children at different stages of education. The children in general evaluated most highly the good teacher's teaching and least highly, the good teacher's personal qualities, particularly his patience, kindness, sympathy and understanding. If these findings are also perceived by teachers one might expect that teachers would find the most satisfaction out of actual teaching situations. Investigations (Musgrove, Taylor 1965) have not been in agreement with the childrens' perceptions. All types of school teachers saw their work primarily in intellectual and moral terms while the parents were concerned with instruction. Wilson (1962) has argued that the teachers' role must become more specialized. Mayo (1962) has similarly argued that a teacher's role must broaden in scope, enhancing even more parental functions.

London and Larsen (1964) have gone so far as to investigate the teacher's use of leisure. Their data suggest not only the predominant motif of leisure activities among teachers is passive and uninvolved but that the very motivations which direct them to their activities are essentially passive and uninvolved ones. If the teacher's role is to broaden then the teacher ought to be able to perceive more satisfying experiences stemming from a wider range of activities.

Changes which are taking place or thought to be imminent in the contemporary teacher's role have been discussed in rather general terms. Actual investigations of the teacher's role, the professional behavior in which he engages and which is expected of him have been few. Amitoi Etzioni (1961, 1965), in dealing with the analysis of complex organizations, has thrown additional light on the influences of teacher satisfaction and dissatisfaction. Modern schools have gradually reduced corporal punishment and other coercive means of discipline, and stress the need of psychological insight, leadership of the teacher, climate of the classroom, and other such normative means. If the generalization holds, then again the role of teacher changes and perhaps incidences of satisfaction also change.

As one examines the organizational structure of schools in addition to the changing roles of teacher questions regarding the satisfaction of teachers needs are raised. Becker (Etzopni, 1965) views the public school as an authority system. The teacher conceives of herself as a professional with specialized training and knowledge in the field of her school activity: teaching and taking care of children. To her, the parent is a person who lacks such background and is, therefore, unable to understand her problems properly. The parent is considered to have no legitimate right to interfere with the work of the school in any way. Problems of authority appear whenever parents challenge this conception. One could assume that teachers will perceive dissatisfaction when the authority is challenged. The principal is accepted as the supreme authority in the school. This is true no matter how poorly he fills the position. Teachers have a well-developed conception of just how and toward what ends the principal's authority should be used and conflict arises when it is used without regard to the teachers' expectations. The principal is expected to "back the teacher up" and support her authority. This, for teachers, one of the major criteria of a good principal. One could readily assume that dissatisfaction will result when the principal does not back the teacher up.

That the job shapes the man or the school forms the teacher is a matter of agreement in American society (Schaefer, 1967). Willard Walker (1932) has most convincingly presented a comparable theme - that the teacher is formed by the social situations imposed by his job. This introduction has raised issues for which there exists a relative paucity of investigations. There is little which deals directly with the school itself or with its educative influence upon teachers. One might think that the profession of teaching which by definition is dedicated to non-material ends would be most involved with intrinsic rewards. In fact, however, one has to probe carefully in educational literature to find references to the personal satisfaction in teaching role. Such references are more useful for the inferences drawn from them than for the direct evidence they provide (Schaefer, 1967). Research reports, on the other hand, provide material about extrinsic job satisfactions, such as social status of teachers, salaries, community attitudes, security and fringe benefits. One can find more accounts of satisfactions and dissatisfactions in teaching from the literary record rather than educational research.

This present paper is designed to include the following two basic questions (1) Do team teachers and team taught students report more satisfying or more dissatisfying school experiences than traditional teachers and students? and (2) What are the sources of the teachers' and students' satisfying and dissatisfying school experiences?

The little research done in this area has indicated the difficulty in evaluating the answers to the above questions. Flanagan (1954) has made use of a method called the critical incident technique. The critical incident technique consists of a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems. The critical incident technique outlines having special significance and meeting systematically defined criteria. This technique to explore teachers' and students' satisfactions, dissatisfactions and their cources.

Much of the administrator's time is spent on the problem of recruiting good teachers. However, there has been little in the way of research to determine the influence of the school in satisfying teacher needs. It is important that we gain knowledge of rewards that are presently open to teachers. Teacher conversation in the "lounge" often centers around the large number of dissatisfying experiences that teachers receive daily. There appears to be a tremendous concern for the present educational process. Educational innovations are starting to fill rooms with articles and books. The new curriculum movement, however, cannot attain its full effect until it finds viable means of attracting teachers to the intellectual excitement it seeks to create in children (Schaefer, 1967). This present investigation was a necessary step in providing information necessary to evaluate the effects of team teaching as developing a satisfying atmosphere in teachers and students.

Hypothesis:

1. Students with differing abilities, grouped heterogenously, in a planned team approach, will have significantly better school attitudes than students taught by traditional methods and grouped homogenously.

2. There will be no significant difference between teachers (of students with differing abilities, grouped heterogeneously, in a planned team approach), and teachers (of students taught by traditional methods and grouped homogeneously) in the ability to perceive their students' school attitudes.

3. Students with differing abilities, grouped heterogeneously in a planned team approach will have significantly more satisfying and significantly less dissatisfying school experiences, than students taught by traditional methods and grouped homogeneously.

4. Teachers of students with differing abilities, grouped hetero~~homo~~geneously in a planned team approach, will have significantly more satisfying and significantly less dissatisfying school experiences, than teachers of students taught by traditional methods and grouped homogeneously.

5. The sources of school satisfaction and dissatisfactions will be significantly different for students with differing abilities grouped heterogeneously, in a planned team approach, compared to students taught by traditional methods and grouped homogeneously.

METHOD AND PROCEDURES

POPULATION AND DESIGN

The city within which this study was conducted is a high income suburban community of approximately 80,000 population according to census tract information. It should be mentioned, however, that the city has 7 poor census tracts consisting of 1,163 poor families which is about 15.8 percent of the total population. There is approximately 12,000 student public school population.

There are eleven elementary, 2 junior high and one high school. The poor student population is about eighteen percent.

The Albert Leonard Junior High School is where the Team Teaching program is being carried out. It has a total student population of approximately 1700 in grades 7, 8 and 9. Previously, upon entrance into school a student was placed into one of three tracts, high, middle or low, on the basis of reading, I.Q. and teacher recommendation. There are no significant differences between I.Q. range, reading range between grades.

The approximate IQ range by grade level, based on the Lorge-Thorndike Verbal Test of Mental Ability, administered in Grade 6 was:

Grade 7	75-140
Grade 8	73-145
Grade 9	72-150

The approximate reading score range by grade level based on the reading sub-test of the Iowa Test of Basic Skills was:

Grade 7	3.0-12.2
Grade 8	3.0-12.8
Grade 9	3.9-12.8

Although New Rochelle is considered a large high income city, approximately 18% of the students live in below average socio-economic areas. The significantly highest percentage of students from poor neighborhoods at Albert Leonard Junior High School are Negro.

The approximate proportion of disadvantaged children in the school is probably between 20%-25%, including both Negro and white.

The approximate percentage of white and Negro pupils in the entire school:

White	78%
Negro	22%

A large proportion of students from poor neighborhoods were placed in the third tract.

1967-68 School Year Design

The initiation of the Team Teaching Program began with the randomized selection of students for the flexible heterogeneously grouped, planned team approach (Experimental Group) and the traditional, homogeneously grouped approach (Control Group) for social studies only. Investigation indicated no significant difference in reading and IQ between experimental and control groups.

The control group was composed of approximately 300 students in each grade or a total of almost 900 pupils. The pupils in the control group were taught the traditional program in the traditional manner. In other words, they were grouped homogeneously, and the methods and content were adjusted as usual to their ability level. The ninth grade students were in the third year of the experimental study. A comparison of the team vs control results will be made.

Approximately 1711 pupils attend Albert Leonard Junior High School.

571 in Grade 7
549 in Grade 8
591 in Grade 9.

The folliwng indicates the number of classes in each ability level in each grade:

	Grade 7	Grade 8	Grade 9
I. High	6	5	5
II Middle	10	9	11
III Low	6	8	8
Total	22	22	24

The project was carried on in the normal school setting, in a manner which would not upset the regular school program. The course of study of the social studies program at each grade level was the same for both the experimental and control group. The teachers in the experimental and control groups were the same. In other words, the teachers who teach pupils in experimental groups also taught pupils in control groups. Every attempt was made to select teachers who were not committed philosophically to a particular kind of grouping system. A flexible grouping arrangement was established for the experimental group at each grade level. For about three-fifths of the time, the pupils were grouped heterogeneously in large and smaller groups for special presentations (lectures, films, panels, demonstrations, etc.) and discussions. For about two-fifths of the time, they were grouped homogeneously according to the individual needs of students and purposes of instruction such as remedial help, skill building, enrichment activities, independent individual study, testing, etc. The grouping for instruction was not set; it was varied according to the needs and purposes of instruction. The pupils in each experimental group were scheduled for social studies during the same period. A team of four teachers worked with each experimental group; there were nine teams, three for each grade level, composed of 100-110 pupils, or a total of 900-930. The teaching schedules were arranged so that the teacher teams had the same period free for cooperative planning. One member of each team was designated team leader; all team teachers had one less teaching assignment. The chairman of the social studies department was relieved of one teaching assignment to act as coordinator of the project.

1968-69 School Year Design

Those students who were in grades 7 and 8 Social Studies Team Teaching for the 1967-68 school year continued in grades 8 and 9 respectively for 1968-69. The Team Teaching and Flexible grouping in Social Studies was in existance for the 1968-69 school year in grades 8 and 9 only.

In September of 1968 the Seventh Grade School was implemented. This is a new program combining the School-Within-A-School with Team Teaching and Flexible Grouping for the entire grade.

During the 1968-69 school year the seventh grade students at Albert Leonard Junior High School were involved in a new program designed to:

1. Make better use of the school-within-a school plan.
2. Increase the educational, creative and social development of each student.
3. Make the transition from elementary to junior high school less confusing.
4. Foster better inter-group relations among these young people.

This new program was an outgrowth of the critical re-assessment undertaken by the staff and administration during the 1967-68 school year. From this re-assessment a basic consensus emerged: that the educational program must be made more relevant so that students can clearly see the relationship between what they learn in school and what goes on in the outside world.

Staff members also felt it was important for teachers to be able to work more closely together, and to interact on a regular daily basis. In addition, they wanted more opportunities for students and parents to be directly involved in planning the program, curriculum, and activities of the school.

In seeking a format which would facilitate reaching these various goals, it was decided that the team teaching and flexible grouping concept, already in successful operation in the social studies department for several years, could be broadened to include all of the major academic departments.

Because of the desire to provide special attention for seventh graders entering a new school, it was decided to reorganize the school-within-school plan to give the 7th grade a wing of its own.

Seventh grade is a transitional period for youngsters, not only from a "child-centered elementary school to a subject-oriented high school" but also from childhood to adolescence. It is extremely important then to make this change more gradual and less difficult. This can be done if grade seven builds upon the strengths of the elementary school (e.g., small school population, mixed groups in classes, small staff well acquainted with students). One way to approach this ideal, (preparing the students for the new environment of departmentalized curricula in a large school), is to set aside one wing of the school for the exclusive use of 7th grade students.

Since its inception, Albert Leonard Junior High School has been organized on the house plan. However, because of over crowded conditions, and our feeling during the opening years that it was important to have all grades in all of the smaller schools, the original objectives were never achieved. At this time, it is probably still impossible, because of the size of the student body and the complexity of the program, to completely isolate each grade in its own wing of the building. However, the 7th grade was grouped so as to have its own wing for all academic instruction, and such an arrangement formed the foundation of the new program for the 1968-69 school year.

The advantages of this plan for 7th grade students were many. They were still in close contact with the classmates from the feeder school. Traveling within the building was limited. The smaller and younger newcomers did not have to compete with the bigger and older eighth and ninth graders. The students found room designations more easily, and the atmosphere of an elementary school was maintained with some modifications, without the drastic changes previously confronted by these youngsters. Finally, the small staff of twenty-five people working with seven graders only offered a certain security to the pupils which may have been lacking under the previous arrangement.

The entire grade was broken down into five teams with the same number of students, each containing a cross section of the school population. Each student team was taught by six teachers who comprised the teacher team. A sixth teacher was called the "swing teacher" and served a variety of purposes. At times he had small groups; he took a class so that its teacher could work with children needing special attention of some kind, or he worked in a room with another teacher.

The "swing" teacher is one of the most important features of the new 7th grade flexible grouping project. The success of the project is largely dependent upon the skillful use of this teacher. In each of the subject areas except social studies, there were 6 teachers involved only with the seventh grade. During any academic period there were several classes of a subject meeting with a total of 110 students in all classes in a given period. There were 5 teachers available during any academic period. One of these 5 teachers was the "swing" teacher who was not assigned to a room or a specific group of students, but met with various groups of students as specified by the plan for a particular day.

For the first two weeks of the new term, the "swing" teacher spent at least one day observing and assisting each of the other 5 teachers on the team. He was scheduled so that he was free to share the planning period with the other 5 teachers and he participated in all the daily and long-range planning for his subject area. After the first two or three weeks of the semester, as the teachers gegan to get an idea of the strengths and weaknesses of the various students, the "swing" teacher was used in a number of ways to provide the individualized help and instruction so crucial to the program.

The "swing" teacher was used to meet with a small group of students taken from the classes of a subject meeting during any academic period. Depending upon the abilities of that group, he provided remedial work or enrichment material correlated with the topic that the rest of the class was working. A "swing" teacher would take over the regular lesson for any one of the 4 teachers scheduled during a period, thus freeing one of the "regular" teachers to meet with a small group for enrichment or remedial programs. For some lessons the 110 students were broken up into 5 rather than 4 classes, again utilizing the "swing" teacher to enable the students to receive the individualized instruction possible in a smaller class. The "swing" teacher was also useful whenever there were large group activities such as trips, movies, assembly programs or large-group lectures requiring additional supervision. The "swing" teacher may also be used to supervise projects that some students are working on outside of the classroom, such as research work in the library, dramatic work in the auditorium, etc.

The "swing" teacher will, whenever possible, be relieved of extra duties such as homeroom, study, hall and alternate duties, etc., as he will be teaching 5 periods and participating in the team planning and the 5 regular teachers will be teaching 4 periods.

Each academic area (English, social studies, math, science) had a team of six teachers. They had a common planning period to develop a curriculum which was more relevant for today's students. The teachers also devised new methods of presenting this material. Once a week, however, the teams met, cocurricularly, to discuss the group that they were teaching. One result of this team planning was a better co-ordinated curriculum for all students. Every seventh grader experienced the same basic material in each subject. No student was deprived of any part of a given curriculum. It also allowed students to understand the correlation of knowledge among the various disciplines, rather than viewing each subject as an isolated accumulation of data. The greatest benefit of the regular team meetings hoped for was that each teacher would learn more about his students and would come to understand him or her better.

The Unit Chairman is the administrator of the 7th grade "little school". In the past, the unit chairman has been responsible for the supervision of one wing of the building in the broad, house-keeping sense. His duties have been mainly related to student discipline, corridor traffic, classroom management, attendance, etc. In the new program, he worked with teachers on curriculum and innovative methods, in close cooperation with the subject matter chairmen. He served as the coordinator for school and parent or community relations, and student activities. His office was the focus for the planning of assembly programs, clubs, staff meetings, teacher-parent conferences, contacts with various agencies, etc.

Two counselors had the main responsibility for the entire grade, rather than six counselors for all three grades. Starting with group guidance in the fall, and continuing on an individual basis during the year, the counselors were able to concentrate their efforts on the special needs of 7th grade students.

By meeting with the entire teacher team once a week, (and participating to the extent possible in the daily planning sessions), the counselors were informed about their students much more quickly. They were able to help keep teachers more fully informed on a child's progress in other subjects, and on his general adjustment to school. Every teacher was made responsible for the teaching of reading in the subject classroom and devoted time during the classroom period to reading instruction. To assist teachers in this effort was the task of the reading specialist.

The reading specialist assigned to the seventh grade program devoted time to working with teachers in the teaching of reading in English, Social Studies, Science, Mathematics, and Industrial and Home Arts. He made available to seventh grade teachers materials and lesson plans for the teaching of reading in the various subjects. He had planning time with each team discussing and demonstrating methods that would be successful and appropriate for the subject area. He also worked in the classroom with the teachers, helping and giving support in reading instruction.

The seventh grade program was designed to promote an increase in the creative and social development of each student. This program provided a greater chance for all seventh grade students to know each other and to participate in many activities often before limited to eighth and ninth grade students. Two representatives were elected from each traveling group. They formed the Seventh Grade Council.

A Steering Committee of five students were elected by the Seventh Grade Council. They were responsible for establishing and directing the activities during the year.

Certain clubs, limited to seventh grade students, were established because of their necessity and their previous success. These included: the newspaper, band, chorus, dramatics, audio visual, student aid, store, literary and arts magazine, athletic association, etc.

Other extra activities were planned at student-teacher meetings according to the interest of the students. These activities included: assembly programs, class parties, projects, field days, etc.

It is essential to the success of any new program that the parents of the students involved understand and support the program. The group involved in the new project for the 7th grade had therefore decided to organize two kinds of parent-faculty meetings, an initial orientation meeting for all parents of the seventh grade and subsequent monthly meetings for the parents of one interdisciplinary team. (Two meetings were held with different parents and community groups during the summer planning session.)

Proposed 8th Grade Program for 1970-71 School Year

Purpose:

1. To affort students opportunities for choices in a broadened elective program.
2. To involve parents and students in the educational program.
3. To provide opportunities for the student to explore subject matter through flexible grouping and individualization.

4. To provide for variety in the daily schedule for both student and teacher.

Method:

1. Major subjects to meet four times a week.
2. Electives for ten-week periods; two subjects meeting twice a week each. Suggested electives: Typing, film course, intensive reading, Black literature, poetry, cooking for boys, teen-age problems, study of Black music, opera, girls' choir, nature study, culture of foreign lands, etc.
3. A study center available throughout the day, staffed by teachers.
4. Expanded use of library for individual student.
5. Back-to-back scheduling of areas of study to provide flexibility of time.
6. Grouping changes for heterogeneity or homogeneity throughout the year, according to demands of curriculum.
7. Stress on interdisciplinary approach; teachers meeting on regular basis.

Extra: Special programs (a) for reading (b) for unmotivated or non-functioning student.

Method: -1967-68 School Year

A. The basic instrument used in evaluating hypotheses one and two is the Student Opinion Poll II, a 49 item attitude questionnaire. The questionnaire is a revision of an earlier instrument (Jackson and Getzels, 1959), deals with four aspects of school life: the teachers, the curriculum, the student body and classroom procedures. Test reliability, based on Kuder-Richardson formula 20 is .86.

1. The "Student Opinion Poll", a 49 item attitude questionnaire will be administered to the students in experimental and control groups. The students use an IBM Mark Sense card to record their responses and names.

2. Although names of the students were requested, the students are assured by the examiner that their responses would not be seen by their teachers nor by anyone else connected with their school.

3. The students' expressed attitude was designated as "satisfied" if his score was at least one-half of a standard deviation above the mean for the total sample. A "dissatisfied" attitude was a score, at least one-half of a standard deviation below the mean for the total population. Students whose scores are within one-half of a standard deviation from the mean were withdrawn, leaving students who expressed rather clear cut opinions. This is done in order to give teachers the opportunity to judge students that were clearly different from each other in their attitudes toward school.

4. Teachers were shown the "Student Opinion Poll" and were asked to predict how their students might respond to such a questionnaire. The teacher is asked to classify one-third of his students as "most" satisfied, one-third as "least" satisfied and one-third as "average".

5. A teacher's judgment was categorized as accurate when his classification of a student as "most" satisfied or "least" satisfied matched the general direction of the student's expressed attitude. Conversely, a teacher's judgment was considered inaccurate when his classification was the opposite of the student's expressed attitude.

6. For recording purposes an accurate judgment was called a "hit", an inaccurate judgment as "Miss" and "uncertain" when he classified as "average" a student whose score was more than one-half of a standard deviation from the mean in either direction.

7. By chance alone one-third of the teachers' judgments should be "hits" and one third misses" and one-third "uncertain."

B. The basic method used in evaluating Hypotheses three, four and five is a modified critical incident technique. The critical incident technique is an evaluative procedure initially introduced by Flanagan, C.E. (1954). Originally it was used in relation to reporting incidents of airplane mishaps in the Air Force. More recently it has been used as a recording technique. It is felt that this technique could be used in investigating the perceived frequencies and sources of satisfactions among students and teachers in relation to their social studies course.

Control and Experimental teachers and students are asked to respond to two basic questions. The teachers are asked to write their answers while the students are interviewed in a one-to-one situation. The students' responses are recorded by the examiner.

1. "Describe the most satisfying experience you had in this school, in relation to Social Studies, during the 1967-68 school year. Be as specific as possible. Describe the experience and tell why it was satisfying to you."

After recording these experiences, the following information is recorded:

1. "About how many times during the 1967-68 school year did satisfying experiences like this happen to you?"

2. "About how many times during the 1967-68 school year did dissatisfying experiences like this happen to you?"

Judges (three school psychologists) are asked to read and sort the experiences in relation to their sources. Preliminary investigations have indicated four basic sources - students, parents, teachers, administration.

Method: 1968-69 School Year

The basic method required the readministration of the Student Opinion Poll. The basic design had to change due to the implementation of the 7th grade program. The primary focus was on an item analysis of the Student Opinion Poll for two purposes: (1) to evaluate differences, and (2) to gain insight into more specific student reactions to questions about school, peers, teachers, and learning.

Method: Proposed 1969-70 School Year

Riverside Research Institute is assisting the New Rochelle School District in evaluating the team teaching programs at the Albert Leonard and Isaac Young Junior High Schools. The evaluation is being carried out with recently developed tests designed to measure affective (non-cognitive) outcomes of educational programs. The instruments being used in the evaluation of the team teaching program are:

(1) Test of the Special Meaning of Words: An adaptation of the Semantic Differential designed to measure:

a. Student attitudes toward component parts of the school program.

b. The extent to which students in team teaching share similar meanings and values as a result of being in the program. This measure should provide information concerning morale in the team teaching program.

c. Students' self-esteem and self-image.

(2) Level of Aspiration for Academic Achievement: Students will be asked to predict their scores prior to taking the STEP Reading Achievement Test. This predicted score will be compared with actual score achieved to determine whether the heterogeneous and flexible grouping policies of the team teaching program foster realistic levels of aspiration.

(3) Student Outlook Test: A fate control questionnaire designed to assess the effect of team teaching on students' feelings of control over their lives and environment. Data in the Coleman Report showed students' sense of fate control to be among the best predictors of academic achievement.

(4) The People Test: A non-verbal social distance measure designed to assess the effect of team teaching on students' feelings of closeness to or distance from students of their own and opposite race.

(5) Sociometric choice: An adaptation of classic sociometric procedures to assess the effect of team teaching on students' willingness to relate in school and out of school to students of their own and opposite race.

Analyses: 1967-68 School Year

All analyses were made between experimental and control groups. Tests of significance were done for total experimental vs total control. Additional evaluation was conducted by grade and track.

Tests of Significance

Experimental		vs	Control	
Grade	Track		Grade	Track
9	1	________	9	1
9	2	________	9	2
9	3	________	9	3
9	Total	________	9	Total
8	1	________	8	1
8	2	________	8	2
8	3	________	8	3
8	Total	________	8	Total
7	1	________	7	1
7	2	________	7	2
7	3	________	7	3
7	Total	________	7	Total
Total	1	________	Total	1
Total	2	________	Total	2
Total	3	________	Total	3
Total	Total		Total	Total

1. The evaluation of hypothesis one required test of significance (t test) for raw scores on Student Opinion Poll.

2. The evaluation of hypothesis two required the chi square statistic in determining the accuracy of the teachers' judgments of their students attitudes. The accuracy of all teachers were compared to chance (a

hypothetical accuracy of 1/3 hits, 1/3 uncertain and 1/3 misses). In addition, the actual frequency of Experimental teachers was compared to the frequency of Control teachers.

3. The evaluation of hypothesis three and four required tests of significance (t test) on the raw score of number of satisfying and dissatisfying experiences.

4. The evaluation of hypothesis five required the use of the chi square statistic in evaluating the percentages of sources of satisfactions distributed according to students, parents, teachers and administration.

Analyses - 1968-69 School Year

Analyses were made between experimental and control groups in social studies by track in 8th and 9th grade in addition to the total 7th grade.

(1) Analysis of Variance between student responses on the Student Opinion Poll between grades 7, 8 and 9.

(2) Analysis of Variance for grade 8, comparing the interrelationship of track level and team or non-team taught on the Student Opinion Poll.

(3) Analysis of Variance for grade 9 comparing the interrelationship of track level and team or non-team taught on the Student Opinion Poll.

(4) Item analysis of the Student Opinion Poll for total grade 7 and grades 8 and 9 by track. The analysis of these results will be face observations of percentage results for each item rather than the use of tests of statistical significance.

Analyses - Proposed 1969-70 School Year

The statistical evaluation of the team teaching programs at New Rochelle will involve several stages of data reduction. In the initial stages, dependent measures will be obtained from the instruments described above. For example, multi-dimensional scaling techniques will be employed to reduce the proximity data of the People Test, and three-mode principal component factor analysis will be used to derive measures of semantic overlap from the Test of the Special Meanings of Words

Subsequent stages of the statistical evaluation will include the application of several models of variance and covariance allowing for within subject comparisons and unequal cell observations. In the seventh and eighth grades, students participating in team teaching who are tested in November will be compared with other groups of children from the same teams who will be tested in the Spring of 1970. An unbiased type of "before-after" comparison is planned. The "before-after" factor will be treated in the same design with other critical independent variables such as race, sex, and grade of student. When variables such as children's antecedent ability and achievement are statistically controlled, the resulting analyses will most likely be a multifactor mixed model analysis of covariance. This model of analysis of covariance may be used to assess and compare the effects of relevant sets of independent variables upon the dependent variables which will be derived.

In the ninth grade, students who have been in a team teaching program for the past two years will be compared with students who did not participate in the team teaching program. This participation variable may be treated with other variables in between subjects multifactor analysis of variance and covariance. Through the usage of such multifactor models it is possible to assess not only the general effects of team teaching but (through the interpretation of interaction effects) also the different effects which team teaching may have on different types of students.

In addition to the student bases analyses, plans are being made to administer some instruments to teachers. It may, therefore, be possible to evaluate the effects of team teaching programs on the faculty and also to make a series of teacher-student comparisons.

RESULTS

Table 1a

Analysis of Variance Between Grades 7, 8 and 9 on the Student Opinion Poll 1968-69 School Year

Grade	N	Mean	Standard Deviation	F	Level of Significance
7	479	16.73	6.52		
8	159	15.16	6.99		
9	133	13.98	5.15	9.31	.01

Table 1a indicates the grade, number of students, standard deviation, f score and level of significance comparing scores for 7th, 8th and 9th grade students on the Student Opinion Poll. The results indicate significant differences between the grades. The 7th grade total team teaching scored significantly more positive school attitudes than combined team and non-team students in grades 8 and 9.

Table 2a

Analysis of Variance for Grade 8 Comparing Team and Non-Team and Track of Study

1968-69 School Year

Track	Teaching Method	Mean	Standard Deviation
High	Non-Team	15.08	5.12
Middle	Non-Team	14.62	5.84
Low	Non-Team	12.83	4.83
High	Team	13.79	5.44
Middle	Team	18.60	6.20
Low	Team	15.27	6.94

	F Score	Level of Significance
Between Tracks	2.22	Not Signif.
Between Teaching Method	2.56	Not Signif.
Track X Teaching Method	2.13	Not Signif.

Table 2a indicates the comparison of Team vs. Non Team, Track of Study, Teaching Method and Track of Study for grade 8 on the Student Opinion Poll. The results of analysis of variance appear to approach significance but are not statistically significant at the .05 level.

Table 3a

Analysis of Variance for Grade 9 Comparing Team and Non-Team, and Track of Study

1968-69 School Year

Track	Teaching Method	Mean	Standard Deviation
High	Non-Team	13.62	5.46
Middle	Non-Team	13.40	4.54
Low	Non-Team	14.87	4.47
High	Team	16.46	5.56
Middle	Team	12.36	5.27
Low	Team	12.79	4.33

	F Score	Level of Significance
Between Tracks	1.72	Not Significant
Between Teaching Method	.01	Not Significant
Track X Teaching Method	2.48	Not Significant

Table 3a indicates the comparison of Team vs. Non-Team, Track of Study, Teaching Method and Track of Study for grade 9 on the Student Opinion Poll. The analysis of variance between track and teaching method appear to approach significance but non of the results are statistically significant at the .05 level.

Table 4a

Observations of Student Opinion Poll

Item Analysis

1968-69 School Year

Statement 1). This School Listens to Parents Opinions:

(a) The largest percentage of Grade 8, 9, 10 Team and Non-Team Students responded "Too Little"

(b) There were differences by Track. Both Grade 8 high, Team, and Grade 9 high, Team, responded "Too much."

Statement 2). The number of courses given in this school is:

(a) The largest percentage of Grade 7, 8 and 9 Team students responded "just about right."

(b) The largest percentage of Grade 8 and 9 Non-Team Students responded "not enough."

(c) Gradé 9 high Track Team students responded "not enough."

Statement 3). Although teachers differ in this school, most are:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team Students responded: "Fair."

Statement 4). In some schools the principal sees and talks with the students often, while in other schools he rarely sees them. In this school the principal sees and talks with students:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team Students responded: "Too little."

Statement 5). The chance to say or do something without being called upon by the teacher is:

(a) The largest percentage of Grade 7, 8 Team and Non-Team Students responded: "Too little."

(b) The largest percentage of grade 9 Team and Non-Team Students responded "About right."

Statement 6). The things that I am asked to study are of:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team Students responded "Average interest to me."

Statement 7). Getting to know other kids in this school is:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team Students responded "About the same as in other schools."

Statement 8). As preparation for High School, the program of this school is:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team Students responded "About right."

Statement 9). The class material from year to year:

(a) The largest percentage of Grade7, 8 Team and Non-Team responded "Repeats itself too much.."

(b) The largest percentage of Grade 9 Team and Non-Team responded "Repeats itself just enough.."

Statement 10). In this school the teachers' interest in the students' school work is:

(a) The largest percentage of Grade 7 students responded: "Just about right."

(b) The largest percentage of Grade 8, 9 Team and Non-Team students responded: "Not great enough."

Statement 11). When students in this school get bad grades, their classmates usually:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded: "Show the right amount of concern."

Statement 12). Students in this school are:

(a) The largest percentage of Grades 7, 8, 9 Team and Non-Team students responded: "Just smart enough - we are all about the same."

Statement 13). Most of the subjects taught in this school are:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "About average in interest."

Statement 14). The teachers interest in what the students do outside of school is:

(a) The largest number of Grade 7, 8, 9 Team and Non Team students responded "Too small."

Statement 15). The student who shows a sense of humor in class is usually:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "Punished by the teacher more than he should be."

Statement 16). When teachers go too fast students do not know what is going on. In this school, most teachers teach:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "About right."

Statement 17). Students who are good in sports are respected by classmates:

(a) The largest percentage of Grades 7, 8, 9 Team and Non-Team students responded "Neither more or less than they should be."

Statement 18). The practice of competing against each other or of working together in this school:

(a) The largest percentage of Grade 7 (total team) and Grade 8 Non-Team students responded "is well balanced."

(b) The largest percentage of grade 8 team and grade 9 Team and Non-Team responded - "Leans too much toward competition."

Statement 19). On the whole the things we study in this school:

(a) the largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "Should be changed a little."

Statement 20). The teachers I have had in this school seem to know their subject matter:

(a) The largest percentage of Grade 7 (total Team, 8 Team and Non-Team students responded: "quite well."

(b) The largest percentage of Grade 9 Team and Non-Team students responded "fairly well."

Statement 21). Students may work either by themselves or in groups. In this school we work in groups.

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "Too Little."

Statement 22). Students get along together in this school:

(a) The largest percentage of Grade 7 (total team) students responded "about average."

(b) The largest percentage of Grade 8, 9 Team and Non-Team students responded "Not too well."

Statement 23). The amount of school spirit at this school is:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "not enough."

Statement 24). On the whole, this school pays attention to the things you learn from books:

(a) The largest percentage of Grade 7 (total team) students responded "just enough."

(b) The largest percentage of Grade 8, 9 Team and Non-Team students responded "Too much."

Statement 25). Teachers in this school seem to be:

(a) The largest percentage of Grade 9 Non-Team responded: "Generally fair."

(b) The largest percentage of Grade 7, 8 Team and Non-Team, 9 Team, responded "Occasionally Unfair."

Statement 26). The things we do in class are planned:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded: "so completely that we hardly ever get to do what we want."

Statement 27). Our seats in class:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "Never changes.."

Statement 28). The students who receive good grades:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded: "Neither liked or disliked more than they should be."

Statement 29). In this school the teachers' interest in the students' school work is:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded: "Just about right."

Statement 30). In my opinion, student interest in social affairs..:

(a) The largest percentage of Grade7, 8, 9 Team and Non-Team students responded: "too little."

Statement 31). In general the subjects taught are:
(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "about right in difficulty."

Statement 32). When students need special attention, teachers in this school are:
(a) The largest percentage of Grade 7 (total team) students responded "Generally ready to help."
(b) The largest percentage of Grade 8, 9 Team and Non-Team students responded "Ready to help if given special notice."

Statement 33). The ability of the teachers in this school to present new material seems to be:
(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "Average."

Statement 34). In general, students in this school take their studies:
(a) The largest percentage of Grade 8, 9 Non-Team students responded "not seriously enough."
(b) The largest percentage of Grade 7, 8, 9 Team students responded "just about right."

Statement 35). In this school teachers seem to teach:
(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "too many things that are not useful to us now."

Statement 36). When it comes to grading students, teachers in this school are generally:
(a) The largest percentage of Grade 7, 8, 9 Team students responded "just tough enough."
(b) The largest percentage of Grade 8, 9 Non-Team students responded "too tough."

Statement 37). The student who acts differently in this school is likely to find that most students:

(a) The largest percentage of Grade 7, 8, 9 Team students responded "Do not care whether or not he is different."

(b) The largest percentage of Grade 8, 9 Non-Team students responded "Dislike him for being different."

Statement 38). In my opinion, students in this school pay attention to their looks and clothes:

(a) The largest percentage of Grade 7 (total team), 9 (Team and Non-Team) and 8 (Non-Team) students responded "About right."

(b) The largest percentage of Grade 8 Team students responded "Too much."

Statement 39). In general, teachers in this school are:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "somewhat friendly."

Statement 40). In general, I feel the grades I received in this school were:

(a) The largest percentage of Grade 7 (total team), 8 Team and Non-Team), 9 (Team) students responded "Generally what I deserved."

(b) The largest percentage of Grade 9 Non-Team students responded "Sometimes what I did not deserve."

Statement 41). Teaching aids such as films, radio, and the like are used:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "Less than they should be."

Statement 42) . Memory work and the learning of important facts are:

(a) The largest percentage of Grade 7 (total team) students responded "used about right."

(b) The largest percentage of Grade 8, 9 Team and Non-Team students responded "stressed too much."

Statement 43). In some classes the teacher is completely in control and the students have little to say about the way things are run. In other classes the students seem to be boss and the teacher contributes little to the control of the class. In general teachers in this school seem to take:

(a) The largest percentage of Grade 7 (total team) 8 (Non-Team) and 9 (Team students) responded "about the right amount of control."

(b) The largest percentage of Grade 8 (team) and 9 (Non-Team) students responded "too much control."

Statement 44). Some schools hire persons in addition to teachers to help students with special problems. In my opinion, this type of service in this school:

(a) The largest percentage of Grade 7 (total team) students responded "enough to help us with our problems."

(b) The largest percentage of Grade 8, 9 Team and Non-Team students responded "Not enough to help us with our problems."

Statement 45). When a new-comer enters this school, chances are that other students will:

(a) The largest percentage of Grade 7, 8, 9 Team students responded "Welcome him."

(b) The largest percentage of Grade 8, 9 Non-Team students responded "ignore him."

Statement 46). Homework assignments in this school usually:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "are just busy work."

Statement 47). In general, teachers in this school pay:

(a) The largest percentage of Grade 7, 8, 9 Team and Non-Team students responded "about the right attention to individual kids and to the class as a whole."

Statement 48). In general, my feelings toward school are:

(a) The largest percentage of Grade 7, 8 Team and Non-Team students responded "Somewhat favorable - I would like a few changes."

(b) The largest percentage of Grade 9 Team and Non-Team students responded "Somewhat unfavorable - I would like many changes."

RESULTS

Table 1

Test of Significance (t) Between Team and Non Team Taught Students on the Student Opinion Poll

1967-68 School Year

	Number		Mean		Standard Deviation		t	Significant Level*
Grade	Team-	NonTeam	Team	NonTeam	Team	NonTeam		
7	69	93	18.19	16.15	7.27	7.36	1.74	7.10 not significant
8	41	101	17.71	15.8	6.1	5.58	1.69	7.10 not significant
9	64	93	17.98	15.7	7.24	5.64	2.09	7.05
Total	177	287	18.05	15.93	6.94	6.18	3.37	7.01

.05 or greater · = t = 1.96

Table 1 shows the number, mean scores, standard deviations, t statistic and significance level for Team and Non Team taught students. Comparisons are made by grade and by total oppulation. A level of .05 or greater is used as the level of confidence. Results in table 1 indicate significant differences between Team and Non Team taught students. The differences are significant for the total sample as well as for grade 9. Grade 7 and 8 appear to approach significance but cannot be considered significant at the .05 level of significance. Team Taught students yield significantly more positive responses on the Student Opinion Poll than Non-Team Students.

Table 2

Test of Significance (t) Between 7th and 8th Grade Team Taught Students on the Student Opinion Poll

1967-68 School Year

	GRADE	
	7th	8th
Number	69	41
Mean	18.19	17.71
Standard Deviation	7.27	6.10
t	.37	
*Level of Significance	Not significant	

*.05 or greater = t = 1.96

Table 2 shows the number, means, Standard deviations, t statistic and level of significance for 7th and 8th grade Team Taught students. The results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between 7th and 8th grade Team Taught Students.

Table 3

Test of Significance (t) Between 7th and 9th Grade Team Taught Students on the Student Opinion Poll

1967-68 School Year

	GRADE	
	7th	9th
Number	69	64
Mean	18.19	17.98
Standard Deviation	7.27	7.24
t	.20	
*Level of Significance	Not Significant	

*.05 or greater = t = 1.96

Table 3 shows the number, means, standard deviation, t statistic and level of significance for 7th and 9th grade Team Taught students. The results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between 7th and 9th grade Team Taught Students.

Table 4

Test of Significance (t) Between 8th and 9th Grade Team Taught Students on the Student Opinion Poll

1967-68 School Year

	GRADE	
	8th	9th
Number	41	64
Mean	17.71	17.98
Standard Deviation	6.10	7.24
t	.20	
*Level of Significance	Not Significant	

*.05 or greater = t = 1.96

Table 4 shows the number, means, standard deviations, t statistic and level of significance for 8th and 9th grade Team Taught Students. The results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between 8th and 9th grade Team Taught Students.

Table 5

Test of Significance (t) Between 7th and 8th Grade Non-Team Taught Students on the Student Opinion Poll.

1967-68 School Year

	GRADE	
	7th	8th
Number	93	101
Mean	16.15	15.83
Student Deviation	7.36	5.58
t	.34	
*Level of Significance	Not Significant	

*.05 or greater =t=1.96

Table 5 shows the number, means, standard deviations, t statistic and level of significance for 7th and 8th grade Non-Team Taught students. The results indicate that there are no significant differences in the number of positive responses on the Student Opinion Poll, between 7th and 8th grade Non-Team Taught students.

Table 6

Test of Significance (t) Between 7th and 9th Grade Non-Team Taught Students on the Student Opinion Poll

1967-68 School Year

	GRADE	
	7th	9th
Number	93	93
Mean	16.15	15.70
Standard Deviation	7.36	5.64
t	.46	
*Level of Significance	Not Significant	

*.05 or greater = t = 1.96

Table 6 shows the number, means, standard deviations, t statistic and level of significance for 7th and 9th grade Non-Team Taught students. The results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between 7th and 9th grade Non-Team Taught students.

Table 7

Test of Significance (t) Between 8th and 9th Grade Non-Team Taught Students on the Student Opinion Poll.

1967-68 School Year

	GRADE	
	8th	9th
Number	101	93
Mean	15.83	15.70
Standard Deviation	5.58	5.64
t	.16	
*Significant Level	Not Significant	

*.05 or greater ≠ t ≠ 1.96

Table 7 shows the number, means, standard deviations, t statistic and level of significance for 8th and 9th grade Non-Team Taught students. The results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between 8th and 9th grade Non-Team Taught students.

The following tables numbered 8-14 indicate comparisons related to the students educational "track." Track I, indicates above average, Track II indicates average and Track III indicates below average.

Table 8

Test of Significance (t) Between Team and Non Team Taught Students by Track on the Student Opinion Poll

1967-68 School Year

Track	Number		Mean		Standard Deviation		t	Significance Level*
	Team	NonTeam	Team	Non Team	Team	Non Team		
I	77	77	18.49	16.35	7.23	6.17	1.963	.05
II	48	126	18.27	16.09	8.54	6.18	1.60	>.20 not significant
III	49	73	17.0	14.67	7.69	6.39	1.74	>.10 not significant

*.05 or greater = t = 1.96

Table 8 shows the number, means, standard deviations, t statistic and significance level for Team and Non Team students. All comparisons are by "Track" of study. Results indicate differences between Team and Non Team students by Track in number of positive responses on the Student Opinion Poll. However, only the difference between Track I Team and Non Team students are significant at the .05 level of significance. Difference of Track II and III Team and Non Team Students appear to approach significance. Track I Team Taught Students have significantly more positive responses on the Student Opinion Poll than Track I, II and III Non-Team Taught students.

Table 9

Test of Significance (t) Between Track I and Track II Team Taught Students on the Student Opinion Poll

1967-68 School Year

	TRACK	
	I	II
Number	77	48
Mean	18.49	18.27
Standard Deviation	7.23	8.54
t	.148	
*Level of Significance	Not significant	

*.05 or greater = t = 1.96

Table 9 shows the number, means, standard deviations, t statistic and level of significance for Track I and II Team Taught Students. The results indicate that there are no significant differences in the number of positive responses on the Student Opinion Poll, between Track I and Track II Team Taught Students.

Table 10

Test of Significance (t) Between Track I and Track III Team Taught Students on the Student Opinion Poll.

1967-68 School Year

	TRACK	
	I	III
Number	77	49
Mean	18.49	17.0
Standard Deviation	7.23	7.69
t	1.0	
*Level of Significance	Not Significant	

* .05 or greater = t = 1.96

Table 10 shows the number, means, standard deviations, t statistic and level of significance for Track I and Track III Team Taught Students. Results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between Track I and Track III Team Taught students.

Table 11

Table of Significance (t) Between Track II and Track III Team Taught Students on the Student Opinion Poll

1967-68 School Year

	TRACK	
	II	III
Number	48	49
Mean	18.27	17.0
Student Deviation	8.54	7.69
t	.765	
*Level of Significance	Not Significant	

*.05 or greater = t = 1.96

Table 11 shows the number, means, standard deviations, t statistic and level of significance for Track II and Track III Team Taught students. Results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between Track II and Track III Team Taught students.

Table 12

Test of Significance (t) Between Track I and Track II Non Team Taught Students on The Student Opinion Poll

1967-68 School Year

	TRACK	
	I	II
Number	77	126
Mean	16.35	16.09
Standard Deviation	6.17	6.18
t	.292	
*Level of Significance	Not Significant	

*.05 or greater = t = 1.96

Table 12 shows the number, means, standard deviations, t statistic and level of significance for Track I and Track II Non Team Taught students. Results indicate that there are no significant differences, in the number of positive responses on the Student Opinion Poll, between Track I and Track II Non Team Taught students.

Table 13

Test of Significance (t) Between Track I and Track III Non-Team Taught Students on the Student Opinion Poll

1967-68 School Year

	TRACK	
	I	II
Number	77	73
Mean	16.35	14.67
Standard Deviation	6.17	6.39
t	1.63	
*Level of Significance	<.10 Not Significant	

*.05 or greater = t = 1.96

Table 13 shows the number, means, standard deviations, t statistic and level of significance for Track I and Track III Non Team Taught students. Results indicate that Track I Non Team Taught students have more positive responses on the Student Opinion Poll than Track III Non Team Taught students. However, these differences only approached significance but were not significant at the .05 level of significance.

Table 14

Test of Significance (t) Between Track II and Track III Non Team Taught Students on the Student Opinion Poll

1967-68 School Year

	TRACK	
	II	III
Number	126	73
Mean	16.09	14.67
Student Deviation	6.17	6.39
t	1.53	
*Level of Significance	<.10 Not Significant	

*.05 or greater = t = 1.96

Table 14 shows the number, means, standard deviations, t statistic and level of significance for Track II and Track III Non Team Taught students. Results indicate that Track II Non Team Taught students have more positive responses on the Student Opinion Poll, than Track III Non Team Taught students. However, these differences only approached significance but were not significant at the .05 level of significance.

Table 15

Accuracy of Teachers' Predictions of Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	43
Misses	23
Uncertain	34
Chi Square	6.09
Significance Level *	>.05

x^2 .05 = 5.991

Table 15 indicates the accuracy of Teachers' predictions of Team Taught students' school attitudes. On the basis of chance alone the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 15 indicate that the accuracy of teacher judgment of Team Taught students' school attitudes was significantly better than chance, at the .05 level of significance and two degrees of freedom. There were more Hits and less Misses than chance expectancies.

Table 16

Accuracy of Teachers' Predictions of Non Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	33
Misses	32
Uncertain	35
Chi Square	.15
Significant Level*	Not Significant

$* x^2 = .05 = 5.991$

Table 16 indicates the accuracy of Teachers' predictions of Non Team Taught students' school attitudes. On the basis of chance alone the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 16 indicate that the accuracy of teacher judgment of Non Team Taught students school attitudes was not significantly better than chance.

Table 17

Accuracy of Teachers' Predictions of 7th Grade Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	39
Misses	28
Uncertain	33
Chi Square	1.79
Significance Level	Not Significant

X = .05 = 5.991

Table 17 indicates the accuracy of Teachers' predictions of 7th Grade Team Taught Students' school attitudes. On the basis of chance alone the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 17 indicate that the accuracy of teachers' judgmeent of 7th grade Team Taught students' school attitudes was not significantly better than chance.

Table 18

Accuracy of Teachers' Predictions of 7th Grade Non Team Taught Students School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	42
Misses	29
Uncertain	29
Chi Square	3.42
Significance Level*	Not Significant

$*x^2 = .05 = 5.991$

Table 18 indicates the accuracy of teachers' predictions of 7th grade Non-Team Taught students' school attitudes. On the basis of chance alone the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 18 indicate that the accuracy of teacher judgment of 7th grade Non Team Taught students' school attitudes was not significantly better than chance.

Table 19

Accuracy of Teachers' Predictions of 8th Grade Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	44
Misses	23
Uncertain	33
Chi Square	6.70
Level of Significance*	.05

*x^2 = .05 = 5.991

Table 19 indicates the accuracy of teachers' predictions of 8th grade Team Taught Students' School Attitudes. On the basis of chance alone the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 19 indicate that the accuracy of teacher judgment of 8th grade Team Taught students school attitudes was significantly better than chance at the .05 level of significance. There were more Hits and less Misses than chance expectancies.

Table 20

Accuracy of Teachers Predictions of 8th Grade Non Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	27
Misses	41
Uncertain	32
Chi Square	3.06
Level of Significance*	Not Significant

*x^2 = .05 = 5.991

Table 20 indicates the accuracy of Teachers' predictions of 8th grade Non Team Taught students' school attitudes. On the basis of chance alone the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 20 indicate that the accuracy of teachers judgment of 8th grade Non Team Taught students' school attitudes was not significantly better than chance.

Table 21

Accuracy of Teachers' Predictions of 9th Grade Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	46
Misses	20
Uncertain	34
Chi Square	10.25
Level of Significance*	$>.01$

*$x^2 = .05 = 5.991$

Table 21 indicates the accuracy of Teachers' predictions of 9th Grade Team Taught Students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 21 indicate that the accuracy of teachers' judgment of 9th grade Team Taught students' school attitudes was significantly better than chance at the .01 level of significance. There were more Hits and less Misses than chance expectancies.

Table 22

Accuracy of Teachers Predictions of 9th Grade Non Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	27
Misses	30
Uncertain	43
Chi Square	4.39
Level of Significance*	Not Significant

$x^2 = .05 = 5.991$

Table 22 indicates the accuracy of Teachers' predictions of 9th grade Non Team Taught students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 22 indicate that the accuracy of teachers' judgment of 9th grade Non Team Taught students' school attitudes was not significantly different from chance. However, the chi square value appears to approach significance indicating less Hits and more Uncertain judgments.

Table 23

Accuracy of Teachers' Predictions of Track I
Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	43
Misses	30
Uncertain	27
Chi Square	4.39
Level of Significance*	Not significant

$*x^2 = .05 = 5.991$

Table 23 indicates the accuracy of Teachers' predictions of Track I Team Taught students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 23 indicate that the accuracy of teacher judgment of Track I Team Taught students' school attitudes was not significantly different from chance. However, the chi square value appears to approach significance indicating more Hits.

Table 24

Accuracy of Teachers' Predictions of Track I Non Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	27
Misses	46
Uncertain	27
Chi Square	7.30
Level of Significance*	$>.05$

* $x^2 = .05 = 5.991$

Table 24 indicates the accuracy of Teachers' predictions of Track I Non Team Taught Students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 24 indicate that the accuracy of teacher judgment of Track I Non Team Taught students' school attitudes, was significantly different than chance at the .05 level of significance. There were more Misses and less Hits.

Table 25

Accuracy of Teachers Predictions of Track II Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	40
Misses	21
Uncertain	39
Chi Square	6.94
Level of Significance*	.05

* $x^2 = .05 = 5.991$

Table 25 indicates the accuracy of teachers' predictions of Track II Team Taught students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses, and one third Uncertain. The results in Table 25 indicate that the accuracy of teacher judgment of Track II Team Taught students school attitudes was significantly different than chance at the .05 level of significance. There were significantly less Misses.

Table 26

Accuracy of Teachers' Predictions of Track II Non Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	27
Misses	23
Uncertain	50
Chi Square	12.91
Level of Significance*	.005

* $x^2 = .05 = 5.991$

Table 26 indicates the accuracy of teachers' predictions of Track II Non Team Taught students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 26 indicate that the accuracy of teacher judgment of Track II Non Team Taught students' school attitudes was significantly different from chance at greater than the .005 level of significance. There was a higher incidence of Uncertain judgments.

Table 27

Accuracy of Teachers' Predictions of Track III
Team Taught Students School Attitudes

1967-68 School Year

Accuracy of Teacher Prediction	Percentage
Hits	47
Misses	21
Uncertain	32
Chi Square	10.33
Level of Significance*	$>.01$

* $x^2 = .05 = 5.991$

Table 27 indicates the accuracy of teachers' predictions of Track III Team Taught students' school attitudes. On the basis of chance the expected prediction would be one third Hits, one third Misses and one third Uncertain. The results in Table 27 indicate that the accuracy of teacher judgment of Track III Team Taught students' school attitudes was significantly different from chance at greater than .01 level of significance. There was a higher incidence of Hits and lower incidence of Misses.

Table 28

Accuracy of Teachers Predictions of Track III Non Team Taught Students' School Attitudes

1967-68 School Year

Accuracy of Teacher Predictions	Percentage
Hits	54
Misses	15
Uncertain	31
Chi Square	23.29
Level of Significance*	$>.005$

* $x^2 = .05 = 5.991$

Table 28 indicates the accuracy of teachers' predictions of Track III Non Team Taught students' school attitudes. On the basis of chance the expected predictions would be one third Hits, one third Misses and one third Uncertain. The results in Table 28 indicate that the accuracy of teacher judgment of Track III Non Team Taught students' school attitudes was significantly different from chance, at greater than .005 level of significance. There was a higher incidence of Hits and lower incidence of Misses.

Table 29

Means, Range, t Statistic, for Frequency of Satisfying and Dissatisfying Critical Incidents of Team Taught Students

1967-68 School Year

	Satisfying	Dissatisfying
Mean	16.03	17.65
Range	1-180	1-150
t	.20	
Significance Level	Not Significant	

Table 29 shows the means, range, and t statistic for the frequency of satisfying and dissatisfying critical incidents of Team Taught students. There is no indication that there is any significant difference in the frequency of satisfying and dissatisfying school experiences.

Table 30

Means, Range, t statistic for Frequency of Satisfying and Dissatisfying Critical Incidents of Non-Team Taught Students

1967-68 School Year

	Satisfying	Dissatisfying
Mean	8.87	21.22
Range	1-60	1-180
t	1.48	
Significance Level	Not Significant	

Table 30 shows the means, range, and t statistic for the frequency of satisfying and dissatisfying critical incidents of Non-Team Taught Students. Although there is no significant difference at the .05 level, the results appear to approach significance. There are more dissatisfying than satisfying school experiences for Non-Team Taught students .

Table 31

Means, Standard Deviation, t statistic Comparing the Frequency of Dissatisfying Critical Incidents for Team and Non-Team Taught Students.

1967-68 School Year

	Team	Non-Team
Mean	17.65	21.22
Standard Deviation	39.96	42.09
t	.30	
Level of Significance	Not Significant	

Table 31 shows the Means, Standard Deviation and t statistic comparing the frequency of Dissatisfying Critical incidents for Team and Non-Team Taught students. There is no indication that there is any significant difference in the frequency of dissatisfying school experiences between Team and Non-Team Taught Students .

Table 32

Means, Standard Deviation, t statistic comparing the Frequency of Satisfying Critical Incidents for Team and Non-Team Taught Students

1967-68 School Year

	Team	Non-Team
Mean	16.04	8.87
Standard Deviation	38.5	12.48
t	.88	
Level of Significance	Not Significant	

Table 32 shows the Means, Standard Deviation and t statistic comparing the frequency of Satisfying Critical Incidents for Team and Non-Team Taught students. There is no indication that there is any significant difference in the frequency of satisfying school experiences between Team and Non-Team Taught Students.

Table 33

Chi Square, Percentage Distribution of Satisfying and Dissatisfying Critical Incidents According to their Source for Team Taught Students

1967-68 School Year

SOURCE	PERCENTAGE	
	Satisfying	Dissatisfying
Peers	1	4
Teachers	30	52
Lessons	46	33
Grades	23	11
Chi Square	36.77	
Level of Significance*	>.001	

*x^2 = .05 = 7.82

Table 33 shows the chi square and percentage distribution of satisfying and dissatisfying critical incidents according to their source for Team Taught Students. Results indicate that there is a significant difference between the source of satisfying and dissatisfying school experiences for Team Taught Students. Satisfying experiences appear to stem from the lessons while dissatisfying experiences are related to teachers.

Table 34

Chi Square, Percentage Distribution of Satisfying and Dissatisfying Critical Incidents According to their Source for Non-Team Taught Students.

1967-68 School Year

SOURCE	PERCENTAGE	
	Satisfying	Dissatisfying
Peers	9	8
Teachers	9	22
Lessons	65	57
Grades	17	13
Chi Square	10.16	
Level of Significance*	$>.02$	

*x^2 + .05 = 7.82

Table 34 shows the chi square and percentage distribution of satisfying and dissatisfying critical incidents according to their source for Non-Team Taught students. Results indicate that there is a significant difference between the source of satisfying and dissatisfying school experiences for Non-Team Taught students. Although the greatest source for both satisfying and dissatisfying school experiences was the lesson, the dissatisfying experiences had additional relevance to teachers.

Table 35

Chi Square, Percentage Distribution of Satisfying Critical Incidents according to their source for Team and Non-Team Taught Students

1967-68 School Year

SOURCE	Percentage Satisfying	
	Team	Non-Team
Peers	1	9
Teachers	30	9
Lessons	46	65
Grades	23	17
Chi Square		63.67
Level of Significance*		$>.001$

*x^2 = .05 = 7.82

Table 35 shows the chi square and percentage distribution of satisfying critical incidents according to their source for Team and Non-Team Taught students. Results indicate that there is a significant difference between the source of satisfying school experiences for Team and Non-Team Taught Students. Although both indicate a higher relationship between satisfying experiences and "Lessons", Team students had more satisfying experiences with teachers, than Non-Team students.

Table 36

Chi Square, Percentage Distribution of Dissatisfying Critical Incidents According to their source for Team and Non-Team Taught Students

	Percentage Dissatisfying	
SOURCE	Team	Non-Team
Peers	4	8
Teachers	52	22
Lessons	33	57
Grades	11	13
Chi Square		63.33
*Level of Significance		$>.001$

$^{*}x^2 + .05 * 7.8^2$

Table 36 shows the chi square and percentage distribution of dissatisfying critical incidents according to their source for Team and Non-Team Taught Students. Results indicate that there is a significant difference between the sources of dissatisfying school experiences for Team and Non-Team Taught Students. The highest percentage dissatisfying school experiences for Team Taught Students were in relation to teachers, while for Non-Team Taught Students they were in relation to the lessons.

DISCUSSION

The broad areas of investigation of the Team Teaching study have yielded several significant findings. In addition to the statistically significant results the evaluation has pointed toward further areas of exploration as well as a proposed refinement of analyses and techniques.

The basic instrument and procedure in the evaluation was the Student Opinion Poll and the Critical Incident Technique. The results of the Student Opinion Poll should be looked upon as the result of single evaluations during particular time periods.

As the statistical results of the 1967-68 study indicated significant findings, an examination was made of them in light of the original hypotheses.

Hypothesis 1, "Students with differing abilities, grouped heterogeneously, in a planned team approach, will have significantly better school attitudes than students taught by traditional methods and grouped homogeneously," was supported by the results. In addition to the main hypothesis the same approach was used to more finely investigate the general finding. Generally, Team Taught Students had significantly more positive school attitudes than Non-Team Taught Students. Additional examination was done to see if these results were related to grade and/or academic functioning (Track) of the students. Team Taught students had significantly more positive attitudes for the total and for grade 9 at at least the .05 level of confidence. This did not hold true for grades 7 and 8, although the figures appeared to approach significance. Further investigation indicated that there were no significant differences by grade for Team Taught students and there were no significant differences by grade for Non-Team Taught students. One could now possibly assume that the significant findings between Team and Non-Team students was not influenced by or related to the grade of the students.

Additional evaluation was performed between Team and Non-Team students by their academic functioning (Track). There were significantly more positive school attitudes for Track I (high achieving) Team students than for Track I Non-Team students, at the .05 level of confidence. Differences between Track II Team and Non-Team, and Track III Team and Non-Team were not statistically significant although they appeared to approach significance in favor of Team students having more positive school attitudes.

Additional evaluation by Track within Team and within Non-Team was performed. There were no significant differences between Tracks for Team Taught students. Differences of Non-Team students by Track appeared to approach significance. Non-Team students grouped homogeneously by Track found Track I (high achieving) have more psoitive school attitudes than Track III (low achieving) students. Track II (average) also had more psoitive school attitudes than Track III (low achieving) students. Generally there were no differences in school attitudes of High, Average, and Slow Achieving students when grouped heterogeneously and taught in a planned team approach. There were differences between Slow Achieving and Average and High Achieving students' school attitudes when grouped homogeneously and taught by traditional methods. In both cases Low Achieving students had less positive school attitudes. These differences were not significant at the .05 level of confidence although the differences were great enough to warrant further investigation as well as a refinement of statistical techniques.

A major, but not experimentally based, criticism of team teaching often voiced by parents and teachers is "How well can the teacher know the student?" "The teacher of a traditional class can really get to know his students." Hypothesis II indicated "There will be no significant differences between teachers (of students with differing abilities, grouped heterogeneously, in a planned team approach), and teachers (of students taught by traditional methods and grouped homogeneously) in the ability to perceive their students' school attitudes." Results indicated that the accuracy of Team Teacher predictions was significantly better than chance at the .05 level of confidence while the Non-Team teachers' predictions was not significantly better than chance.

Once again an attempt was made to see if the above results were related to grade and/or Track of study. Neither Team nor Non-Team teachers were able to predict 7th grade students' school attitudes. This might be expected as the 7th grade students were in the school the shortest period of time. Team Teachers were able to predict the attitudes of their 8th and 9th grade students significantly better than chance while Non-Team Teachers were not.

Both Team and Non-Team teachers were able to predict the attitudes of their students by Track of study significantly better than chance. This finding might have wide spread implications relating to expectancy of students behavior provided additional investigation was performed. It is possible however this knowledge of students' attitudes by Track of study can be handled effectively in a planned team approach.

Appropriate sampling in evaluating Hypothesis III ("Students with differing abilities, grouped heterogeneously in a planned team approach will have significantly more satisfying and significantly less dissatisfying school experiences, than students taught by traditional methods and grouped homogeneously.") was hampered by the previously mentioned tragedies. (1967-68 Report). Results did not support Hypothesis III. Significant differences were found between the Sources of Satisfaction and Dissatisfaction for Team and Non-Team Students. Team Students' satisfactions basically involved their Lessons while their dissatisfactions involved Teachers. While satisfactions and dissatisfactions for Non-Team students both involved Lessons.

The findings of these broad and basic areas pointed up the need for further evaluation and a refinement of statistical procedures. Although an investigation was conducted into the number of positive school attitudes, a need persists to see what these attitudes consist of as they relate to school, peers, teachers and subjects. In addition to the sources of satisfaction and dissatisfaction, it is felt that the Critical Incident Technique is a valuable procedure for investigating the differences in what the actual incidents consist of.

The 1967-68 findings, as well as the previous years, have been accepted by the school with excitement and enthusiasm. It was the opinion of the administration and teaching staff that the "Team Teaching and Flexible Grouping, Social Studies Program" would be broadened to include all of the major academic departments. It is through the broadening of this program for the entire 7th grade that the staff hoped to achieve 4 major goals in the present 1968-69 school year.

1. Make better use of the school-within-a-school plan.

2. Increase the educational, creative and social development of each student.

3. Make the transition from elementary to junior high school less confusing and more meaningful.

4. Faster, better inter-group relations among young people.

Through this approach it was hoped that teachers would have more opportunity to work together and interact on a regular daily basis. In addition, there were more opportunities for teachers, students and parents to be directly involved in planning the program, curriculum and activities of the school.

Evaluation in a school setting is often far removed from the controlled setting of the laboratory. The results of the present 1968-69 study are somewhat different than the previous findings. This present study saw the initiation of total Team Teaching for the entire 7th grade. In addition to the establishment of this innovative approach, the continued programing of students into the social studies Team Teaching in 8th and 9th grade proved to be a difficult task. Individual student, staff and school needs saw a breakdown of the five experimental and control groups of the past. Both experimental and control groups contained students that had and had not had, previous exposure to the Team Teaching Social Studies program.

The 1968-69 results indicated that the students involved in the 7th grade Total Team Teaching had significantly more positive school attitudes than students in grades 8 and 9. The school attitudes were more closely correlated to grade than to method of teaching and track of study. One could hypothesize that Team and Non-Team taught students physically move together (by mixing of experimental and control students) there is also a moving together of expressed attitudes toward some common mean. It is possible that all students gain greater insight into each other. The basic hypothesis will be explained in the 1969-70 school year.

The item analysis of the Student Opinion Poll should provide teachers and students with information for evaluation and discussion leading to a greater understanding of student attitudes and how it relates to school achievement.

SUMMARY

In the 1967-68 school year (as in the previous 3 years), approximately 900 pupils or one half of the Albert Leonard Junior High School, grades 7, 8 and 9, were involved in a social studies team teaching flexible grouping demonstration. The program was in its fourth year of operation. Previous findings have indicated better attitudes for Team Students and no differences in achievement between Team and Non-Team students.

The 1967-68 study involved the use of two major techniques: (a) Student Opinion Poll -- to determine students' school attitudes and their teachers' ability to predict those attitudes, and (b) Critical Incident Technique -- to evaluate frequency and source of student Satisfactions and Dissatisfaction.

1967-68 results indicated the following differences:

1. Students with differing abilities, grouped heterogeneously in a planned team approach (Team Taught Students), had significantly better school attitudes than students taught by traditional methods and grouped homogeneously (Non-Team Taught Students).

2. Assumptions were made that the significant findings of attitudes between Team and Non-Team students was not influenced by or related to the grade of the students.

3. There were significantly more positive attitudes for Track I (high achieving) Team students, than for Track I Non-Team students.

4. Differences between Track II (average achieving) Team and Track II Non-Team appeared to approach significance with Team Students having more positive school attitudes.

5. Differences between Track III (low achieving) Team and Track III Non-Team appeared to approach significance with Team Students having more positive school attitudes.

6. There were no significant differences in school attitudes between Track I, II, and III of Team Students.

7. Differences in school attitude between Track I and III, and Non-Team Students appeared to approach significance with Track III students having less positive school attitudes.

8. Assumptions were made that the Team Teaching flexible grouping program has a positive influence on school attitudes of students.

9. The accuracy of Team Teachers' predictions of their students' school attitudes was significantly better than chance.

10. The accuracy of Non-Team Teachers' predictions of their students' school attitudes was not significantly better than chance.

11. Teachers' predictions were better for 8th and 9th grade students than for 7th grade students.

12. Team Teachers were more accurate in their judgment of Track II and III students than Track I students.

13. Non-Team Teachers were accurate in their judgment of their students school attitude in all three Tracks.

14. Assumptions are made that indicate the possibility of Track of Student as influencing Teacher judgement.

15. There were no significant differences in the frequency of Satisfaction and Dissatisfaction for and between Team and Non-Team Students.

16. There were significant differences between the Sources of Satisfaction and Dissatisfaction in Team and Non-Team Students. Team students' Satisfactions involved their Lessons while their Dissatisfactions involved Teachers. Satisfactions and Dissatisfactions for Non-Team students both involved their Lessons.

The 1968-69 school year (present study) saw the initiation of Total Team Teaching for the entering 7th grade. Both present 8th and 9th grade Experimental and Control groups contained a large number of students that had and had not been a part of the Team Teaching in Social Studies.

The 1968-69 results indicated that the students involved in the 7th grade total Team Teaching had significantly more positive school attitudes than students in grades 8 and 9. There also appeared to be a moving together of expressed attitudes as a result of exposure to each other in Team Teaching.

Proposed plans for the initiation of total Team Teaching into the 8th grade, in addition to methods of evaluation for the 1969-70 and 1970-71 school year, were presented.

In addition to the results, safeguards to avoid overgeneralization and further areas of needed investigation were reported. The administration and teaching staff of the Albert Leonard Junior High School have broadened the Team Teaching and Flexible grouping program to include all of the major academic areas. The program will include the entire 7th and 8th grades. Through this approach it is hoped that teachers will have more opportunity to work together and interact on a regular basis. In addition, there will be more opportunities for teachers, students, and parents to be directly involved in planning the program, curriculum and activities of the school.

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APPENDIX

STUDENT OPINION POLL (REVISED)[1]

This is not a test. The answer to each question is a matter of opinion. Your true opinion, whatever it is, is the right answer. You will be asked a lot of questions about the school in which you are now studying. Wherever the words "school", "teacher", and "student" appear, they refer to this school, the teachers you have had while studying here, and your classmates in this school.

HERE IS AN EXAMPLE

Sample. In general I study
SA. too little
A. too much
D. about the right amount

IF YOUR ANSWER IS (SA) "TOO LITTLE" YOU PRESS YOUR STYLUS ON THE BLACK RECTANGLE UNDER THE SAMPLE QUESTION NEXT TO THE LETTERS SA

Question	Sample	1	2
SA	▱	▱	▱
A	▱	▱	▱
D	▱	▱	▱
SD	▱	▱	▱

If your answer is (A) "too much" you press your stylus on the black rectangle next to the letter (A).

Only one answer for each question should be pressed.

Please read each statement carefully. You will not be able to change your response once you have pressed the black rectangle on the card. Be sure the number on your answer sheet is the same as the question number. Do not mark this booklet.

If you have any questions, raise your hand and you will be helped.

---

[1] Lahaderne, Henriette M. and Jackson, Philip W, University of Chicago.

1. This school listens to parents' opinions
   SA. too much
   A. just enough
   D. too little

2. The number of courses given in this school is
   SA. too many
   A. just about right
   D. not enough

3. Although teachers differ in this school, most are,
   SA. very good
   A. good
   D. fair
   SD. poor

4. In some schools the principal sees and talks with the students often, while in other schools he rarely sees them. In this school the principal sees and talks with students.
   SA. too often
   A. just about the right amount
   D. too little

5. The chance to say or do something in class without being called upon by the teacher is
   SA. too little
   A. too much
   D. about right

6. The things that I am asked to study are of
   SA. great interest to me
   A. average interest to me
   D. of little interest to me
   SD. of no interest to me

7. Getting to know other kins in this school is
   SA. easier than usual
   A. about the same as in other schools
   D. more difficult than usual

8. As preparation for High School, the program of this school is
   SA. too tough
   A. about right
   D. too easy

9. The class material from year to year
   SA. repeats itself too much; you learn the same material over and over.
   A. repeats itself just enough to make you feel what was learned before helps you now
   D. is so new that the things learned in the last grade do not help much in this one.

10. In this school the teachers' interest in the students' school work is
   SA. too great
   A. just about right
   D. not great enough

11. When students in this school get bad grades, their classmates usually
   SA. feel sorrier for them than they should
   A. admire them more than they should
   D. show the right amount of concern

12. Students in this school are
   SA. too smart--it is difficult to keep up with them
   A. just smart enough--we are all about the same
   D. not smart enough-they are so slow I get bored

13. Most of the subjects taught in this school are
   SA. very interesting
   A. about average in interest
   D. below average in interest
   SD. dull and uninteresting

14. The teachers' interest in what the students do outside of school is
   SA. too great
   A. about right
   D. too small

15. The student who shows a sense of humor in class is usually
   SA. admired by the teacher more than he should be
   A. punished by the teacher more than he should be
   D. given about the right amount of attention

16. When teachers "go too fast," students do not know what is going on. In this school, most teachers teach
   SA. too slowly
   A. about right
   D. too fast.

17. Students who are goo in sports are respected by classmates
  SA. more than they should be
  A. less than they should be
  D. neither more or less than they should be

18. The practice of competing against each other or of working together in this school
  SA. leans too much toward competition
  A. leans too much toward working together
  D. is well balanced

19. On the whole, the things we study in this school
  SA. are about right
  A. should be changed a little
  D. should be completely changed

20. The teachers I have had in this school seem to know their subject matter
  SA. very well
  A. quite well
  D. fairly well
  SD. not as well as they should

21. Students may work either by themselves or in groups. In this school we work in groups
  SA. too often
  A. just enough
  D. too little

22. Students get along together in this school
  SA. very well
  A. about average
  D. not too well
  SD. very badly

23. The amount of "school spirit" at this school is
  SA. more than enough
  A. about right
  D. not enough

24. On the whole the school pays attention to the things you learn from books
  SA. too much
  A. just enough
  D. not enough

25. Teachers in this school seem to be
   SA. almost always fair
   A. generally fair
   D. occasionally unfair
   SD. often unfair

26. The things we do in class are planned
   SA. so badly that it is hard to get things done
   A. so well that we get things done
   D. so completely that we hardly ever get to do what we want

27. Our seats in class
   SA. change too much; we can never be sure where we will set and who will sit next to us
   A. change about the right number of times
   D. never change; we stay in the same place all year

28. The students who receive good grades are
   SA. liked more than they should be by their classmates
   A. disliked more than they should by their classmates
   D. neither liked nor disliked more than they should be

29. In this school the teachers' interest in the students' school work is
   SA. just about right
   A. not great enough
   D. too great

30. In my opinion, student interest in social affairs, such as clubs, scouts, and the "Y" is
   SA. too great
   A. about right
   D. too little

31. In general the subjects taught are
   SA. too easy
   A. about right in difficulty
   D. too difficult

32. When students need special attention, teachers in this school are
   SA. always ready to help
   A. generally ready to help
   D. ready to help if given special notice
   SD. ready to help only in extreme cases.

33. The ability of the teachers in this school to present new material seem to be
   - SA. very good
   - A. good
   - D. average
   - SD. poor

34. In general, students in this school take their studies
   - SA. too seriously
   - A. not seriously enough
   - D. just about right

35. In this school teachers seem to teach
   - SA. too many things that are not useful to us now
   - A. too many things that are useful to us now but not later
   - D. both things that are useful now and can be useful later

36. When it comes to grading students, teachers in this school are generally
   - SA. too "tough"
   - A. just "tough" enough
   - D. not "tough" enough

37. The student who acts differently in this school is likely to find that most students
   - SA. dislike him for being different
   - A. do not care whether or not he is different
   - D. like him for being different

38. In my opinion, students in this school pay attention to their looks and clothes
   - SA. too much
   - A. about right
   - D. too little

39. In general, teachers in this school are
   - SA. very friendly
   - A. somewhat friendly
   - D. somewhat unfriendly
   - SD. very unfriendly

40. In general, I feel the grades I received in this school were
SA. always what I deserved
A. generally what I deserved
D. sometimes what I did not deserve
SD. frequently what I did not deserve

41. Teaching aides such as films, radio, and the like are used
SA. more than they should be
A. as much as they should be
D. less than they should be

42. Memory work and the learning of important facts are
SA. stressed too much
A. used about right
D. not stressed enough

43. In some classes the teacher is completely in control and the students have little to say about the way things are run. In other classes the students seem to be boss and the teacher contributes little to the control of the class. In general, teachers in this school seem to take
SA. too much control
A. about the right amount of control
D. too little control

44. Some schools hire persons in addition to teachers to help students with special problems. In my opinion, this type of service in this school is
SA. more than enough--it is often forced upon us
A. enough to help us with our problems
D. not enough to help us with our problems

45. When a new-comer enters this school, chances are that other students will
SA. welcome him
A. ignore him
D. dislike him

46. Homework assignments in this school usually
SA. help us to understand
A. have little to do with what we learn in class
D. are just "busy work"

47. In general, teachers in this school pay
  SA. too much attention to individual kids and not enough to the class as a whole
  A. not enough attention to individual kids and too much to the class as a whole
  D. about the right attention to individual kids and to the class as a whole

48. In general, my feelings toward school are
  SA. very favorable--I like it as it is
  A. somewhat favorable--I would like a few changes
  D. somewhat unfavorable--I would like many changes
  SD. very unfavorable--I frequently feel that school is pretty much a waste of time

49. In this school the teachers' interest in the students' school work is
  SA. not great enough
  A. too great
  D. just about right.